

**EXHIBIT A**  
**(Invention Disclosure Record)**

Re: Invention Disclosure: Disc Performance Analysis Tool  
PD Number: 10006728

Dear Kevin Collins:

Thank you for submitting an Invention Disclosure Form dated [REDACTED] relating to the above referenced invention. We have placed this disclosure in our active disclosure list as a "NEW" disclosure and we will review your disclosure at our next patent coordinator meeting.

Your disclosure has been assigned PD Number 10006728. You may call this office and check on the status of your disclosure at any time by using this PD Number.

Again, on behalf of HP, I want to thank you for submitting your invention disclosure. Please bear in mind that you should treat all information about this invention as confidential. Please contact T. Grant Ritz at 970 898 0697 immediately if you need to disclose this invention outside of Hewlett-Packard. Failure to do so may cause forfeiture of your Hewlett-Packard rights.

Sincerely,

Legal Department  
Intellectual Property Section

CC: Joe Gersch

Re: Invention Disclosure: Disc Performance Analysis Tool  
PD Number: 10006728

Dear [REDACTED]

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Sincerely,

Legal Department  
Intellectual Property Section

CC: Joe Gersch

	<b>INVENTION DISCLOSURE</b>	OVRU-FCS DATE RCVD [REDACTED]	PAGE ONE OF _____ ATTORNEY TGR
PDNO 10006728			
Instructions: The information contained in this document is COMPANY CONFIDENTIAL and may not be disclosed to others without prior authorization. Submit this disclosure to the HP Legal Department as soon as possible. No patent protection is possible until a patent application is authorized, prepared, and submitted to the Government.			
Descriptive Title of Invention: <i>Disc performance analysis tool</i>			
Name of Project: <i>Disc performance analysis tool</i>			
Product Name or Number:			
Was a description of the invention published, or are you planning to publish? If so, the date(s) and publication(s): <i>NO</i>			
Was a product including the invention announced, offered for sale, sold, or is such activity proposed? If so, the date(s) and location(s): <i>NO</i>			
Was the invention disclosed to anyone outside of HP, or will such disclosure occur? If so, the date(s) and name(s): <i>NO</i>			
<small>If any of the above situations will occur within 3 months, call your IP attorney or the Legal Department now at 1-898-4919 or 970-898-4919.</small>			
Was the invention described in a lab book or other record? If so, please identify (lab book #, etc.): <i>NO</i>			
Was the invention built or tested? If so, the date: <i>NO</i>			
Was this invention made under a government contract? If so, the agency and contract number: <i>NO</i>			
Description of Invention: Please preserve all records of the invention and attach additional pages for the following. Each additional page should be signed and dated by the inventor(s) and witness(es).			
A. Description of the construction and operation of the invention (include appropriate schematic, block, & timing diagrams; drawings; samples; graphs; flowcharts; computer listings; test results; etc.)			
B. Advantages of the invention over what has been done before.			
C. Problems solved by the invention.			
D. Prior solutions and their disadvantages (if available, attach copies of product literature, technical articles, patents, etc.).			
Signature of Inventor(s): Pursuant to my (our) employment agreement, I (we) submit this disclosure on this date: [ ]			
319067	<i>Kevin Collins</i>	<i>Kevin Collins</i>	878-4672 45 40F1 PB Store
Employee No.	Name	Signature	Telnet Mailstop Entity & Lab Name
Employee No.	Name	Signature	Telnet Mailstop Entity & Lab Name
Employee No.	Name	Signature	Telnet Mailstop Entity & Lab Name
Employee No.	Name	Signature	Telnet Mailstop Entity & Lab Name
(If more than four inventors, include additional information on another copy of this form and attach to this document)			

<b>INVENTION DISCLOSURE</b>		COMPANY CONFIDENTIAL	PAGE ____ OF ____
<b>Signature of Witness(es):</b> <i>(Please try to obtain the signature of the person(s) to whom invention was first disclosed.)</i>			
The invention was first explained to, and understood by, me (us) on this date: [ _____ ]			
Full Name	Signature	Date of Signature	
Full Name	Signature	Date of Signature	
<b>Inventor &amp; Home Address Information:</b> <i>(If more than four inventors, include addl. information on a copy of this form &amp; attach to this document)</i>			
Inventor's Full Name			
Street			
City	State	Zip	
Do you have a Residential P.O. Address? P.O. BOX	City	State	Zip
Greeted as <i>(nickname, middle name, etc.)</i>	Citizenship		
Inventor's Full Name			
Street			
City	State	Zip	
Do you have a Residential P.O. Address? P.O. BOX	City	State	Zip
Greeted as <i>(nickname, middle name, etc.)</i>	Citizenship		
Inventor's Full Name			
Street			
City	State	Zip	
Do you have a Residential P.O. Address? P.O. BOX	City	State	Zip
Greeted as <i>(nickname, middle name, etc.)</i>	Citizenship		
Inventor's Full Name			
Street			
City	State	Zip	
Do you have a Residential P.O. Address? P.O. BOX	City	State	Zip
Greeted as <i>(nickname, middle name, etc.)</i>	Citizenship		

**Description of Invention:** *Please preserve all records of the invention and attach additional pages for the following. Each additional page should be signed and dated by the inventor(s) and witness(es).*

A. Description of the construction and operation of the invention (include appropriate schematic, block, & timing diagrams; drawings; samples; graphs; flowcharts; computer listings; test results; etc.)

B. Advantages of the invention over what has been done before.

C. Problems solved by the invention.

D. Prior solutions and their disadvantages (if available, attach copies of product literature, technical articles, patents, etc.).

Description of Invention:

A. Description of the construction and operation of the invention

Using a filter driver which intercepts all file system accesses we can determine the performance of disk drives themselves. We can separate out the overhead of the operating system and file system and get a detailed view of how long reads and writes took to specific disk drives. This tool can be used in competitive analysis and could be used to evaluate existing disks for their current performance levels. The tool would have a GUI that would give tabular as well as graphical representations of the data collected. The data from such a tool may also be used to provide insight into future disk problems.

B. Advantages of the invention over what has been done before

I'm not aware of a product which does this.

C. Problems solved by the invention

It enables people to assess the true performance of a disk/array in the process of a purchasing decision or a replacement decision. It may also be used to characterize current disk performance so that data may be moved to better performing storage and/or provide insight into a disk that may soon fail.

D. Prior solutions and their disadvantages

I'm not aware of prior solutions.